PATENT
Customer No. 22,852
Attorney Docket No. 05788.0167

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Paolo MARELLI et al.	)	Group Art Unit: Unassigned
	)	
Serial No.: Unassigned	)	Examiner: Unassigned
	)	
Filed: Herewith	)	
	)	
For: METHOD AND APPARATUS FOR MANUFACTURING AN OPTICAL FIBRE CABLE AND CABLE SO MANUFACTURED	)	

being a **Continuation** of International Patent Application No. PCT/EP00/09647 filed December 6, 1999

BOX PATENT APPLICATION
Assistant Commissioner for Patents
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

Before examining this application, please amend the application as follows:

IN THE SPECIFICATION:

Please amend the specification as follows:

Page 1, after the title, insert a new paragraph as follows:

--CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of International Application No. PCT/EP99/09647, filed December 6, 1999, and claims the priority of EP98124775.2,

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filed December 29, 1998, and the benefit of U.S. Provisional application No. 60/116,229, filed January 15, 1999, the contents of all of which are relied upon and incorporated herein by reference.--

Page 5, delete lines 17-22, and substitute the following therefor:

Preferably, the temperature variation in the tube length subjected to the traction force is lower than approximately 10% of the total thermal gap subjected by the tube along the extrusion line. Preferably, the temperature variation in the tube length subjected to said second traction force is lower than approximately 20°C and more preferably lower than approximately 10°C.

Page 13, delete lines 27-29, and substitute the following therefor:

Preferably, the temperature variation in the length of tube subjected to traction should be less than approximately 10% of the total thermal gap of the tube along the extrusion line.

IN THE CLAIMS:

Please cancel claims 1-16 without prejudice or disclaimer and substitute new claims 17-31 therefor, as follows:

WHAT IS CLAIMED IS:

17. (New) A method for the production of a polymeric material tube associated with at least one optical fibre accommodated therein, which comprises the following steps:

a) feeding said at least one optical fibre along a path to an extruder;

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b) extruding polymeric material around said optical fibre to form said tube; and

c) cooling the tube to a predetermined final temperature by the following steps comprising:

d) applying a first traction force to the tube containing said optical fibre in a first section of an extrusion line;

e) applying a second traction force to said tube in a second section of said extrusion line, with substantial lack of congruence between said fibre and said tube, said second traction force being greater than said first traction force; and

f) applying a third traction force to said tube in a third section of said extrusion line, said third traction force being less than said second traction force; wherein

the tube temperature during the step in which said second traction force is applied undergoes a limited variation.

18. (New) A method according to Claim 17, wherein said second traction force is applied at a tube temperature at which the polymeric material has a modulus of elasticity that is less than approximately 2000 Mpa.

19. (New) A method according to Claim 18, wherein, at the tube temperature at which said second traction force is applied, the polymeric material has a modulus of elasticity that is between approximately 100 Mpa and approximately 2000 Mpa.

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20. (New) A method according to Claim 19, wherein at the tube temperature at which said second traction force is applied, the polymeric material has a modulus of elasticity that is between approximately 300 Mpa and approximately 1500 Mpa.

21. (New) A method according to Claim 17, wherein said final temperature is less than approximately 40°C.

22. (New) A method according to Claim 21 , wherein said final temperature is approximately 20°C.

23. (New) A method according to Claim 17, wherein the temperature variation in the length of tube subjected to said second traction force is less than approximately 10% the total thermal gap undergone by the tube along the extrusion line.

24. (New) A method according to Claim 17, wherein the temperature variation in the length of tube subjected to said second traction force is less than approximately 20°C.

25. (New) A method according to Claim 17, wherein the temperature variation in the length of tube subjected to said second traction force is less than approximately 10°C.

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26. (New) A method according to Claim 17 , wherein said second traction force is predetermined so as to cause a stretching of at least 1% when the polymeric material of the tube is polybutyleneterephthalate (PBT).

27. (New) A tube of polymeric material produced in an extrusion process and comprising at least one optical fibre accommodated therein, characterized in that, during production, said tube is stretched such that the longitudinal shrinkage of said tube after a storage period of one week or longer immediately after said extrusion is at least 20% less than a similar tube that was not stretched.

28. (New) Apparatus for producing a tube comprising at least one optical fibre accommodated therein, comprising:

a) an extruder for producing a tube of plastic material containing at least one optical fibre;

b) at least one cooling pool; and

c) a stretching device for applying increased pulling on a length of said tube, the temperature variation in said tube length being 10% less than the total thermal gap of the tube from the extruder to ambient temperature.

29. (New) The equipment according to Claim 28, wherein said stretching device comprises a driving element and a braking element arranged between the extruder and said driving element.

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30. (New) The equipment according to Claim 29, wherein said driving element comprises a motor-driven wheel or a couple of motor-driven feeding tracks.

31. (New) The equipment according to Claim 29, wherein said braking element comprises a motor-driven wheel or a couple of motor-driven feeding tracks, where the tube is fed at a speed less than the speed at which it is fed through the driving element.

REMARKS

The claims and specification have been amended to conform them to the Article 34 amendment filed in PCT/EP99/09647 and to conform them to U.S. practice. Claims 17-31 are pending in this application. No new matter has been added.

If there is any fee due in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

Dated:

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APPENDIX

IN THE SPECIFICATION

Page 5, lines 17-22, have been amended as follows:

Preferably, the temperature variation in the tube length subjected to the traction force is lower than approximately 10% [lower than] of the total thermal gap subjected by the tube along the extrusion line[; preferably]. Preferably, the temperature variation in the tube length subjected to said second traction force is lower than approximately 20°C and more preferably lower than approximately 10°C.

Page 13, lines 27-29, have been amended as follows:

Preferably, the temperature variation in the length of tube subjected to traction should be less than approximately 10% [less than] of the total thermal gap of the tube along the extrusion line.

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